

In re Simesen et al.
Application No. 10/664,775

Page 4 of 16
6448.200-US

AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all prior versions, and listings, of claims.

LISTING OF CLAIMS

1-2 (cancelled)

3. (currently amended) The method of claim 16 ~~1~~, wherein the at least one S/MAR element comprises ~~(i) SEQ ID NO:1 or SEQ ID NO:2, (ii) a functional fragment of SEQ ID NO:1 or SEQ ID NO:2, or (iii) a sequence that is at least about 70% homologous to SEQ ID NO:1 or SEQ ID NO:2~~ protein is Factor VII or a Factor VII-related polypeptide.

4. (currently amended) The method of claim 3 ~~2~~, wherein the nucleic acid molecule comprises the two S/MAR elements are selected from (i) SEQ ID NO:1 or SEQ ID NO:2, (ii) functional fragments of SEQ ID NO:1 or SEQ ID NO:2, and ~~or~~ (iii) sequences that are at least about 70% identical ~~homologous~~ to SEQ ID NO:1 or SEQ ID NO:2.

5. (currently amended) The method of claim 4 ~~2~~, wherein the two S/MAR elements are identical.

6. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:1.

7. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:2.

In re Simesen et al.
Application No. 10/664,775

Page 5 of 16
6448.200-US

8. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:3.
9. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:4.
10. (original) The method of claim 5, wherein the identical S/MAR elements comprise SEQ ID NO:5.
11. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:1 and SEQ ID NO:2, respectively.
12. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:3, respectively.
13. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:4, respectively.
14. (currently amended) The method of claim ~~4~~ 2, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:5, respectively.
15. (currently amended) The method of claim ~~3~~ 1, wherein the at least one S/MAR element is located less than about 10 kb from the Factor VII or Factor VII-related polypeptide-encoding sequence.
16. (currently amended) A method for producing a ~~polypeptide or~~ protein comprising (a) transfecting a mammalian cell with a nucleic acid molecule comprising (i) a sequence encoding the ~~polypeptide or~~ protein and (ii) at least one scaffold/matrix attachment region (S/MAR) element comprising (i) SEQ ID NO:1 or

In re Simesen et al.
Application No. 10/664,775

Page 6 of 16
6448.200-US

SEQ ID NO:2, (ii) a functional fragment of SEQ ID NO:1 or SEQ ID NO:2, or (iii) a sequence that is at least about 70% homologous identical to SEQ ID NO:1 or SEQ ID NO:2; (b) culturing the transfected cell under conditions suitable for expression of the polypeptide or protein; and (c) isolating the expressed polypeptide or protein.

17. (original) The method of claim 16, wherein the nucleic acid molecule comprises two S/MAR elements.

18. (original) The method of claim 17, wherein the two S/MAR elements are identical.

19. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:1.

20. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:2.

21. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:3.

22. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:4.

23. (original) The method of claim 18, wherein the identical S/MAR elements comprise SEQ ID NO:5.

24. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:1 and SEQ ID NO:2, respectively.

In re Simesen et al.
Application No. 10/664,775

Page 7 of 16
6448.200-US

25. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:3, respectively.

26. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:4, respectively.

27. (original) The method of claim 17, wherein the two S/MAR elements comprise SEQ ID NO:2 and SEQ ID NO:5, respectively.

28. (original) An isolated DNA molecule comprising one or more S/MAR elements that comprise a sequence selected from the group consisting of SEQ ID NOs:1-5.

29. (original) The isolated DNA molecule of claim 28, wherein the DNA molecule comprises a sequence encoding a human protein or polypeptide or a functional analogue of a human protein or polypeptide.

30. (original) The isolated DNA molecule of claim 29, wherein the protein or polypeptide-encoding sequence is located less than about 10 kb from the one or more S/MAR elements.

31. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:1.

32. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:2.

33. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:3.

In re Simesen et al.
Application No. 10/664,775

Page 8 of 16
6448.200-US

34. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:4.

35. (original) The isolated DNA molecule of claim 30, wherein the isolated DNA molecule comprises SEQ ID NO:5.

36. (currently amended) A vector construct comprising a nucleic acid molecule comprising (a) a sequence encoding Factor VII or a Factor VII-related polypeptide operably linked to one or more expression control elements and (b) one or more S/MAR elements selected from SEQ ID NOs:1-5.

37. Cancelled

38. (currently amended) A mammalian cell comprising the vector of claim ~~36~~ 37.

39. (original) A vector construct comprising a nucleic acid molecule that comprises (a) a sequence encoding a polypeptide or protein operably linked to one or more expression control elements and (b) at least one S/MAR element comprising a sequence selected from SEQ ID NOs:1-5.

40. (original) A mammalian cell comprising the vector of claim 39.

41. (original) An isolated DNA molecule consisting essentially of one or more sequences selected from SEQ ID NOs:1-5.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.